

Application No. 09/821,774
Amendment Dated: February 27, 2006
Reply to Office Action of: December 2, 2005

REMARKS

Applicants respectfully request further examination and reconsideration in view of the above amendments and the arguments set forth fully below. In the Office Action mailed December 2, 2005, and the Advisory Action mailed January 30, 2006, Claims 1-22 have been rejected. In response, the Applicants have submitted the following remarks and amended claims 1, 6 & 16, and cancelled claims 4 & 20. Accordingly, Claims 1-3, 5-19, and 21-22 are pending. Favorable reconsideration is respectfully requested in view of the amended claims and the remarks below.

Rejections Under 35 USC §103

Claims 1-22 have been rejected under 35 USC §103(a) as being unpatentable over U.S. Patent No. 5,065,315 to Garcia (hereinafter Garcia), in view of U.S. Patent No. 5,732,401 to Conway (hereinafter Conway). The applicants respectfully disagree with this rejection.

Within the Office Action, it is stated that Garcia fails to explicitly teach building a model based upon the collected data and hourly cost, and using the model to simulate the flow of patients through the hospital. It is further stated within the Office Action that “however Conway discloses data accumulated is used (sic) to hourly information to determine the cost of the caregiver time and cost of the visit by the caregiver to a patient at a healthcare facility.” The Office Action goes on to state that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Garcia to include building model based upon the collected data and hourly cost and using the model simulate the flow patients through the hospital taught by Conway in order to document the cost of each patient.

While the Office Action states that the combination of Garcia and Conway includes using the model to simulate the flow of patients through the hospital, the Office Action does not specifically point out where using the model to simulate the flow of patients through the hospital is taught in Conway. In fact, the Applicants respectfully

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submit that Conway in no way teaches simulating the flow of patients, nor does it teach any sort of simulation whatsoever. Of course, the Applicants further submit that Garcia does not teach such simulations as well.

Conway teaches a system for tracking costs of medical procedures by monitoring the movements of personnel, supplies and equipment and processing data on these movements to produce detailed and accurate cost accounting records associated with particular services rendered (Conway, abstract).

As described in the present invention, building a model based upon the collected data and hourly cost includes the model being preferably generated by a specialist, that could alternatively be generated automatically using a model generation program. The building step preferably includes a multi-level model of the key hospital care units, and then describing each unit in terms of numbers of monitored beds or other resources in an average length of stay. Beginning at the admission source point, one would assign the percentage of patients that go to each unit, and each care unit, in turn, is further described by the percentage of patients going to other care units, wherein the end point is discharge. The simulation will be started at the admission start point by describing the number of patients to be admitted per unit time and the length of time to run the model. The model will then generate patient flow according to each unit in a path in that units assigned characteristics (present invention, page 5, line 13 through page 6, line 13). Nowhere in Conway is it taught to run a simulation based on a model utilizing an average of the collected data. Following, Conway then cannot teach using the model to simulate the flow of patients through the hospital. In short, Conway merely teaches a system for tracking actual costs and medical procedures in a medical facility.

Furthermore, the applicants renew their assertion that the age of the cited references indicates a lack of some teaching or suggestion supporting the combination. Garcia was filed on October 24, 1989. Conway has a filing date of March 29, 1996. Even with the benefit of a filing date that is almost seven years later than Garcia, Conway still does not include some teaching or suggestion that art in each reference can and

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should be combined. In other words, there is no teaching or suggestion in either reference to make the combination made in the Office Action.

The amended Claim 1 is directed toward a method of assessing patient flow through care units of a hospital using a computer having a microprocessor, comprising collecting data regarding hospital statistics, assigning an hourly cost to each care unit for each patient, building a model based upon the collected data and hourly cost, simulating the flow of patients through the hospital using the model, wherein the simulating step utilizes an average of the collected data, and using the model and the results of the simulating step to recommend hospital resource changes. As described above, neither Garcia, Conway nor their combination teach simulating the flow of patients through the hospital using the model, wherein the simulating step utilizes an average of the collected data, and using the model and the results of the simulating step to recommend hospital resource changes. For at least these reasons, the independent Claim 1 is allowable over the teachings of Garcia, Conway and their combination.

Claims 2-3 and 5-15 are dependent upon the independent Claim 1. As discussed above, the independent Claim 1 is allowable over the teachings of Garcia, Conway and their combination. Accordingly, Claims 2-3 and 5-15 are also allowable as being dependant upon an allowable base claim. Claim 4 has been cancelled.

The amended Claim 16 is directed to a computer system for modeling patient flow through care units of a hospital comprising a collection module configured to accept data regarding hospital statistics, and an assignment module configured to assign an hourly cost to each unit for each patient, a module configured to build a model of the flow of patients through the hospital and a simulation module configured to simulate the flow of patients through the hospital, wherein the simulation module utilizes an average of the data, and a resource module configured to determine a resource utilization of the hospital by utilizing the model and the output of the simulation module. As described above, neither Garcia, Conway nor their combination teach a simulation module wherein the simulation module utilizes an average of the data, and a resource module configured to

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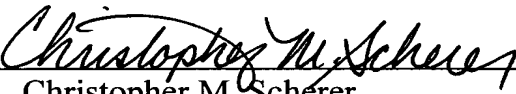
determine a resource utilization of the hospital by utilizing the model and the output of the simulation module. For at least these reasons, the independent Claim 16 is allowable over the teachings of Garcia, Conway and their combination.

Claims 17 -19 and 21-22 depend upon the independent Claim 16. As described above, the independent Claim 16 is allowable over the teachings of Garcia, Conway and their combination. Accordingly, Claims 17-19 and 21-22 are also allowable as being dependent upon an allowable base claim. Claim 20 has been cancelled.

For these reasons, applicants respectfully submit that all the claims are now in a condition for allowance, and allowance at an early date would be appreciated. Should the examiner have any questions or comments, they are encouraged to call the undersigned at 414-271-7590 to discuss the same so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,

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